IN THE CLAIMS

1. (Currently Amended) In a data transmission method of transmitting a serial digital transfer interface transmission packet in which an interval of one line of a video frame comprises an end synchronizing code area in which an end synchronizing code is inserted, an ancillary data area into which ancillary data is inserted, a start synchronizing code area into which a start synchronizing code is inserted and a payload area into which data containing a video signal is inserted, said data transmission method comprising the steps of:

a first step of inserting data indicative of a transfer mode of said transmission packet into said payload area; and

a second step of transferring said transmission packet into which the data indicative of said transfer mode was inserted at said first step in the form of serial data;

whereby the position within said payload area where said data indicative of said transfer mode is inserted is based on both said transfer mode and a timing mode of said transmission packet.

2. (Original) A data transmission method as claimed in claim 1, wherein said data indicative of the transfer mode of said transmission packet is inserted into the payload area at its transfer mode area near a type area into which type data indicative of the type of data of a data block area into which said data is inserted is inserted.

3. (Original) A data transmission method as claimed in claim 1, wherein said data indicating said transfer mode is data indicative of any one of the asynchronous transfer

mode in which said transmission packet converted into serial data is transferred between the transmission side and the reception side in the asynchronous state, the synchronous transfer mode in which said transmission packet converted into serial data is transmitted under the state that the transmission side and the reception side are synchronized with each other and the isochronous transfer mode in which said transmission packet converted into serial data is transmitted at a high speed and in a multiplexed fashion under the state that said transmission side and said reception side are synchronized with each other.

4. (Original) A data transmission method as claimed in claim 1, wherein said video signal is data compressed according to the MPEG standard.

5. (Currently Amended) In a data transmission apparatus for transmitting a serial digital transfer interface transmission packet in which an interval of one line of a video frame comprises an end synchronizing code area into which an end synchronizing code is inserted, an ancillary data area into which ancillary data is inserted, a start synchronizing code area into which a start synchronizing code is inserted and a payload area into which data containing a video signal and/or an audio signal is inserted, said data transmission apparatus comprising:

a data compression device for compressing said video signal;

an encoder for converting data to said serial digital transfer interface format by inserting said compressed data into said payload area; and

a parallel-to-serial converter for converting this encoded output into serial data, wherein said encoder includes means for inserting data indicative of the transfer mode of said transmission packet into said payload area;

whereby the position within said payload area where said data indicative of said transfer mode is inserted is based on both said transfer mode and a timing mode of said transmission packet.

6. (Original) A data transmission apparatus according to claim 5, further comprising means for inserting the data indicative of the transfer mode of said transmission packet into said payload area at its transfer mode area near a type area into which type data indicative of the type of data in a data block area into which said data is inserted is inserted.

7. (Original) A data transmission apparatus as claimed in claim 5, wherein said encoder includes a first formatter for formatting said compressed data to provide said compressed data and first added data in the form of packaged data, a second formatter for formatting first formatted data generated from said first formatter and second added data defined by the serial digital transfer interface format to provide packaged data, and a third formatter for adding third data defined by the serial digital interface format to said serial digital transfer interface format data generated by said second formatter to provide packaged data.

8. (Original) A data transmission apparatus as claimed in claim 5, wherein said data compression device is an MPEG data compression device for compressing data according to the MPEG standard.

9. (Currently Amended) In a data transmission method of transmitting a serial digital transfer interface transmission packet in which an interval of one line of a video frame comprises an end synchronizing code area in which an end synchronizing code is inserted, an ancillary data area into which ancillary data is inserted, a start synchronizing code area into which a start synchronizing code is inserted and a payload area into which data containing a video signal is inserted, said data transmission method comprising the steps of:

a first step of inserting data indicative of a timing mode of said transmission packet into said payload area; and

a second step of transferring said transmission packet into which said timing mode was inserted at said first step in the form of serial data;

whereby the position within said payload area where said data indicative of said timing mode is inserted is based on both said timing mode and a transfer mode of said transmission packet.

10. (Original) A data transmission method as claimed in claim 9, wherein said data indicative of the timing mode is inserted into said payload area at its area near a type area into which type data indicative of the type of data in a data block area into which said data is inserted is inserted.

11. (Original) A data transmission method as claimed in claim 10, wherein said timing area has inserted thereto data indicating whether a timing mode is a normal timing mode in which said transmission packet is transmitted at a timing of transmitting a first field of said video frame, an advanced timing mode in which said transmission packet is transmitted at a timing of transmitting a second field of said video frame or a dual timing mode in which said transmission packet is transmitted at a timing of transmitting the first and second fields of said video frame.

12. (Original) A data transmission method as claimed in claim 9, wherein said video signal is data compressed according to the MPEG standard.

13. (Currently Amended) In a data transmission apparatus for transmitting a serial digital transfer interface transmission packet in which an interval of one line of a video frame comprises an end synchronizing code area into which an end synchronizing code is inserted, an ancillary data area into which ancillary data is inserted, a start synchronizing code area into which a start synchronizing code is inserted and a payload area into which data containing a video signal and/or an audio signals is inserted, said data transmission apparatus comprising:

a data compression device for compressing said video signal;

an encoder for encoding data to said serial digital transfer interface format by inserting said compressed data into said payload area of said transmission packet; and

a parallel-to-serial converter for converting this encoded output into to serial data, wherein said encoder includes means for inserting data indicative of a timing mode of said transmission packet into said payload area;

whereby the position within said payload area where said data indicative of said timing mode is inserted is based on both said timing mode and a transfer mode of said transmission packet.

14. (Original) A data transmission apparatus according to claim 13, further comprising means for inserting data indicative of the timing mode of said transmission packet into said payload area at its timing mode area near a type area into which type data indicative of the type of data of a data block area into which said data is inserted is inserted.

15. (Original) A data transmission apparatus according to claim 13, wherein said encoder includes a first formatter for formatting said compressed data to provide said compressed data and first added data in the form of packaged data, a second formatter for formatting first formatted data generated from said first formatter and second added data defined by the serial digital transfer interface format to provide packaged data, and a third formatter for adding third data defined by the serial digital interface format to said serial digital transfer interface format data generated by said second formatter to provide packaged data.

16. (Original) A data transmission apparatus as claimed in claim 13, wherein said data compression device is an MPEG data compression device for compressing data according to the MPEG standard.